عنوان مقاله:

Biodegradation of Crude Oil by Kocuria sp

محل انتشار:

فصلنامه روشهای تصفیه محیط, دوره 2, شماره 3 (سال: 1393)

تعداد صفحات اصل مقاله: 3

نویسندگان:

Blazo Lalevic - *University of Belgrade, Faculty of Agriculture, Belgrade-Zemun, Serbia*

Vera Raicevic - *Kneza Milosa ۶۴, Belgrade, Serbia*

Iva Atanaskovic - *Faculty of natural sciences, Kosovska Mitrovica, Serbia*

Dragan Kikovic - *Faculty of natural sciences, Kosovska Mitrovica, Serbia*

خلاصه مقاله:

Oil fields are not uniformly dispensed on the world’s map, but are limited in several areas such as Persian Gulf region.Frequent international transport by tankers and shipping accidents makes the oil and its products a most important pollutantof ecosystems. After these accidents, different methods have been developed for clean-up of the polluted areas, out of whichbioremediation has attracted highest attention. The present paper describes the crude oil degradation by bacteria Kocuria sp.27/1, isolated from contaminated wastewater by oil hydrocarbons. This bacteria was used for inoculation of mineral saltmedium containing 500; 1000; 2000; and 4000 ppm of crude oil (v/v). Incubation was performed in orbital shaker (250 rpm)at 30°C for 7 days. The optical density of the liquid culture and final oil concentration were measured. Results showed thatKocuria sp. 27/1 was capable of crude oil degradation. Throughout the experiment, the optical density was rapidly increasedcomparing to the control. The results obtained by this research showed that Kocuria sp. 27/1 can potentially be used forapplication in crude oil biodegradation of natural environments

کلمات کلیدی:

biodegradation, bioremediation, crude oil, microorganisms, oil hydrocarbons-contaminated waters

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